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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/687,615

10/20/2003

Fred Buchali

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EXAMINER

WARE, CICELY Q

ART UNIT

PAPER NUMBER

2611

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

12/29/2006

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/687,615

Applicant(s)

BUCHALI, FRED

Examiner

Cicely Ware

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ~~2~~ **1** MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5 and 8 is/are rejected.
- 7) ☒ Claim(s) 3, 6, 7, 9, 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "signal inverting means or signal inverter" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to because :

a. Fig. 1, elements (M1 – M4), applicant does not place these labels to an element. Examiner suggests applicant match all labels to its corresponding element for clarification purposes. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the

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examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

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5. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

6. The disclosure is objected to because of the following informalities:

a. Pg. 1, line 17, applicant uses the phrase "transported in form". Examiner suggests using "transported in the form" for clarification purposes.

b. Pg. 2, line 6, examiner suggests applicant move line 7 to line 6 for clarification purposes.

c. Pg. 2, line 37, applicant uses the phrase "Such filters comprises". Examiner suggests using "Such filters comprise" for clarification purposes.

d. Pg. 4, line 31, applicant makes reference to "each comprising a signal multiplier M1 – M4". Examiner suggests match all labels to its respective element as in the drawings and/or specification for clarification purposes.

e. Pg. 5, lines 22-23, examiner suggests applicant re-write these lines for clarification purposes.

f. Pg. 5, line 32, applicant uses "defined rage". Examiner suggests using "defined range" for clarification purposes.

g. Pg. 6, line 34, applicant uses the phrase "to the half". Examiner suggests using "to half" for clarification purposes.

h. Pg. 7, line 1, applicant uses the phrase "taps only needs to be unipolar". Examiner suggests using "taps only need to be" for clarification purposes.

Appropriate correction is required.

Claim Objections

7. With regard to claims 1-4, 6, applicant has claimed a "signal inverting means". Examiner is unable to find this element in the drawings. All elements claimed must be shown in the submitted drawings.
8. With regard to claim 7, examiner suggests applicant re-write this claim for clarification purposes.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:
- The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.
10. Claims 1 recites the limitation "the polarity" in lines 13-14. There is insufficient antecedent basis for this limitation in the claim.
11. Claim 1 recites the limitation "the first output" in line 8. There is insufficient antecedent basis for this limitation in the claim.
12. Claim 1 recites the limitation "the other output" in line 9. There is insufficient antecedent basis for this limitation in the claim.
13. Claim 1 recites the limitation "the adding devices" in line 12. There is insufficient antecedent basis for this limitation in the claim.
14. Claim 8, recites the limitation "the inputs of the weight devices" in lines 7-8. There is insufficient antecedent basis for this limitation in the claim.

15. Claim 8, recites the limitation "the polarity" in lines 17-18. There is insufficient antecedent basis for this limitation in the claim.

16. Claim 11, recites the limitation "the structure" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 1, 2, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goeckler (US Patent 5,663,773) in view of Tonami (US Patent 6,914,867).

(1) With regard to claim 1, Goeckler discloses in (Fig. 12c) an electrical signal equalizer comprising a first transversal filter part with a chain of delay elements (T, 2T), individually adjustable signal weighting devices and a signal adding device, wherein the inputs of the weighting devices are each connected to one of said delay elements and the outputs are each connected to said adding device, wherein a signal splitting device (FBAS_{TT}) is comprised connecting the first output to said first transversal filter part and connecting the other output to a second transversal filter part, that a signal combining device is comprised connected to the outputs of the adding devices of the two filter parts.

However Goeckler does not disclose that signal inverting means are comprised for inverting the polarity of the output signals of one of said filter parts.

However Tonami discloses in (Figs. 4 and 37) that signal inverting means (25a, 25b) are comprised for inverting the polarity of the output signals of one of said filter parts (col. 12, lines 41-53).

Therefore it would have been obvious to one of ordinary skill in the art to modify Goeckler in view of Tonami to incorporate that signal inverting means are comprised for inverting the polarity of the output signals of one of said filter parts in order to provide negative feedback (col. 12, lines 50-53).

(2) With regard to claim 2, claim 2 inherits all the limitations of claim 1. Tonami further discloses in (Figs. 4 and 37) wherein the signal inverting means (25b) are realized as a signal inverter, that is connected into the line before or after the second filter part (21b, 24b, 25b).

(3) With regard to claim 8, see rejection of claim 1.

19. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goeckler (US Patent 5,663,773) in view of Tonami (US Patent 6,914,867) as applied to claim 2, in view of Design Choice.

(1) With regard to claim 4, claim 4 inherits all the limitations of claim 2. Goeckler in combination with Tonami disclose all the limitations of claim 2.

However Toughlin et al. in combination with Tonami do not disclose the signal weighting means are realised as signal attenuators.

However Examiner asserts that it is a design choice as to how the signal weighting is modeled for better signal diversity.

Therefore claim 4 does not constitute patentability.

(2) With regard to claim 5, claim 5 inherits all the limitations of claim 2. Goeckler in combination with Tonami disclose all the limitations of claim 2.

However Goeckler in combination with Tonami do not disclose the signal weighting means are realized as variable amplifiers.

However Examiner asserts that it is a design choice as to how the signal weighting is modeled for better signal diversity.

Therefore claim 5 does not constitute patentability.

Allowable Subject Matter

20. Claim 11 is allowed.

21. The following is a statement of reasons for the indication of allowable subject matter: The instant application discloses a method for equalizing an electrical input signal. Prior art references show similar methods but fail to teach: **“an identical input signal is fed to a second filter part of similar structure according to the structure of the first filter part for generating a second output signal, in both filter parts, only unipolar weightings are performed”**, as in claim 11.

22. Claims 3, 6, 9, 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cicely Ware whose telephone number is 571-272-3047. The examiner can normally be reached on Monday – Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on 571-272-3021. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Cicely Ware

cqw
December 21, 2006


MOHAMMED GHAYOUR
SUPERVISORY PATENT EXAMINER